

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
12 May 2005 (12.05.2005)

PCT

(10) International Publication Number
WO 2005/043408 A1

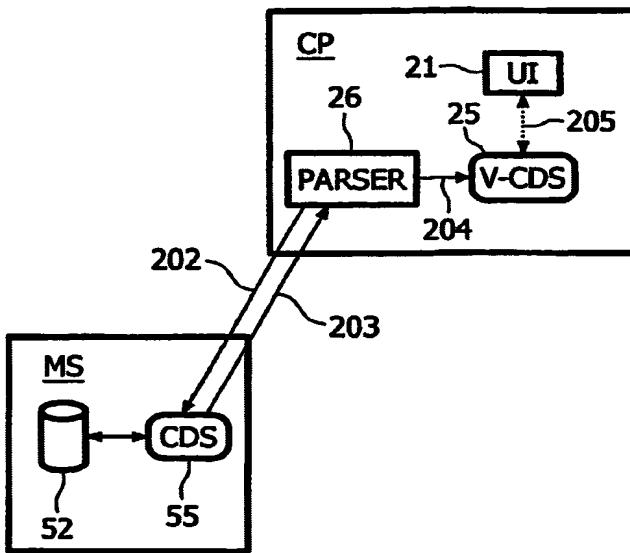
- (51) International Patent Classification¹: **G06F 17/30, H04L 12/28, 29/08**
- (21) International Application Number: **PCT/IB2004/052202**
- (22) International Filing Date: **26 October 2004 (26.10.2004)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
0325673.2 4 November 2003 (04.11.2003) GB
- (71) Applicant (*for all designated States except US*): **KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).**
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **DUNCAN, Bruce [GB/GB]; c/o Philips Intellectual Property & Standards (GB). HERON, Dale, R. [GB/GB]; c/o Philips Intellectual Property & Standards (GB).**
- (74) Agent: **WHITE, Andrew, G.; c/o Philips Intellectual Property & Standards, Cross Oak Lane, Redhill Surrey RH1 5HA (GB).**
- (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): **AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.**
- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): **ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).**

Declaration under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM,*

[Continued on next page]

(54) Title: VIRTUAL CONTENT DIRECTORY SERVICE



(57) **Abstract:** A serving device (MS) stores media content information (meta-data) in a directory, such as the Content Directory Service (CDS, 55) of UPnP. Querying devices, such as UPnP Control Point devices (CP), can query the CDS (55) to obtain information. An alternative representation of the CDS (V-CDS) is maintained by an entity of the system. The alternative, or 'virtual', CDS (V-CDS) stores selected information in a manner which can be more efficiently queried by querying devices. Preferably, the structure of the reorganised information is optimised for the specific browsing, searching and retrieval tasks of the user interface (UI) of a particular querying device. The virtual CDS (VCDS) can aggregate information from a number of different serving devices (MS-a, MS-b, Fig. 5) and can provide a service either to a single querying device or to a group of querying devices.